Amendments to the Claims

The listing of claims replaces all prior versions, and listings, of claims in the application:

Listing of claims

Claim 1: (CURRENTLY AMENDED) A system for determining if at least one gateway is at processing capacity ~~monitoring usage of gateways responsible for managing one or more network elements~~, said system comprising:

said at least one gateway being responsible for managing one or more network elements, said at least one gateway communicatively coupled with one or more network elements;

said at least one gateway measuring an amount of ~~maintaining~~ processing ~~usage information detailing the amount of usage of~~ performed by said at least one gateway ~~in managing said one or more network elements~~; ~~and~~

a usage management system communicatively coupled to said at least one gateway, wherein said at least one gateway is operable to communicate said amount of processing performed ~~usage information~~ to said usage management system; and

a management system capable of determining if said at least one gateway is at a pre-selected processing capacity based on the measured said amount of processing performed.

Claim 2: (CURRENTLY AMENDED) The system of claim 1 wherein said amount of processing performed ~~usage~~ includes an amount of message handling ~~gateway processing~~.

Claim 3: (CANCELLED)

Claim 4: (CURRENTLY AMENDED) The system of claim [[3]] 2 wherein said at least one gateway includes a Small Network Management Protocol (SNMP) gateway responsible for managing one or more SNMP network elements, and wherein said ~~handling of messages~~ amount of message handling includes handling of SNMP messages.

Claim 5: (CURRENTLY AMENDED) The system of claim 4 wherein said SNMP messages includes at [[last]] least one message selected from the group consisting of: SNMP Trap messages, SNMP Get Messages, and SNMP Set messages.

Claim 6: (CURRENTLY AMENDED) The system of claim 1 wherein said at least one gateway includes code executable to track said measured amount of ~~usage of~~ processing performed by said at least one gateway.

Claim 7: (PREVIOUSLY PRESENTED) The system of claim 6 wherein said code includes code implemented within an Application Program Interface (API).

Claim 8: (CURRENTLY AMENDED) The system of claim 7 wherein said API includes functionality that can be invoked to maintain a count of one or more types of processing performed by ~~usage of~~ said at least one gateway.

Claim 9: (CURRENTLY AMENDED) The system of claim 8 wherein said at least one gateway includes code that, upon said at least one gateway performing a type of processing ~~usage~~, invokes said functionality of said API to increment a count for said type of processing ~~usage~~.

Claim 10: (CURRENTLY AMENDED) The system of claim 9 wherein said code invokes said functionality by passing a descriptor of said type of processing ~~usage~~ to said API, and wherein said API maintains a count for said descriptor.

Claim 11: (CURRENTLY AMENDED) The system of claim 1 wherein said at least one gateway includes code executable to track ~~said amount~~ amounts of different types of processing ~~usage~~ of said at least one gateway.

Claim 12: (CURRENTLY AMENDED) The system of claim 11 wherein said code increments a count maintained for a particular one of said amounts of different types of processing ~~usage~~ upon said at least one gateway performing said particular one type of processing ~~usage~~.

Claim 13: (CURRENTLY AMENDED) The system of claim 12 wherein said different types of processing ~~usage~~ includes handling of different types of messages from said one or more network elements.

Claim 14: (CURRENTLY AMENDED) The system of claim 1 wherein said usage management system is operable to poll said at least one gateway for said amount of processing ~~usage information~~.

Claim 15: (CURRENTLY AMENDED) The system of claim 1 wherein said usage management system is operable to compile said measured amount of processing performed ~~usage information received~~ into a file.

Claim 16: (CURRENTLY AMENDED) The system of claim 15 wherein said usage management system is communicatively coupled to a plurality of gateways, and wherein said usage management system is operable to compile said measured amount of processing performed ~~usage information received~~ from said plurality of gateways into a file.

Claim 17: (CURRENTLY AMENDED) The system of claim 15 wherein said usage management system is operable to electronically communicate said file including ~~comprising~~ said measured amount of processing performed ~~usage information~~ to a recipient.

Claim 18: (CURRENTLY AMENDED) The system of claim 1 wherein said usage management system is operable to electronically communicate said measured amount of processing performed ~~usage information received~~ from said at least one gateway to a recipient.

Claim 19: (CURRENTLY AMENDED) A method for [[of]] monitoring an amount of processing performed by ~~usage of~~ one or more gateways that are responsible for managing one or more network elements, said method comprising the steps of:

~~one or more gateways each~~ tracking, by each of said one or more gateways, the amount of processing performed by said one or more gateways ~~their respective usage in managing one or more network elements~~; ~~and~~

~~said one or more gateways each~~ communicating, by each of said one or more gateways, their respective amount of processing performed ~~usage~~ to a usage management system communicatively coupled to said one or more gateways; and

determining if each of said one or more gateways is at a pre-selected processing capacity based on the amount of processing performed by each of said one or more gateways.

Claim 20: (CANCELLED)

Claim 21: (CURRENTLY AMENDED) The method of claim [[20]] 19 wherein said ~~gateway~~ processing performed includes handling of messages received from said one or more network elements.

Claim 22: (CURRENTLY AMENDED) The method of claim 19 wherein said tracking step ~~further~~ comprises the step of:

~~said one or more gateways each~~ executing software code by each of said one or more gateways to compute said amount of processing performed ~~usage~~.

Claim 23: (PREVIOUSLY PRESENTED) The method of claim 22 wherein said software code includes code implemented within an Application Program Interface (API).

Claim 24: (CURRENTLY AMENDED) The method of claim 23 wherein said tracking step further comprises:

~~upon a particular type of usage occurring within said one or more gateways, said one or more gateways~~ invoking, by said one or more gateways, said API to maintain a count of [[said]] a particular type of processing ~~usage~~ when said particular type of processing ~~usage~~ occurs within said one or more gateway.

Claim 25: (CURRENTLY AMENDED) The method of claim 24 wherein said invoking step ~~includes~~ comprises the step of:

passing a descriptor of said type of processing ~~usage~~ to said API.

Claim 26: (CURRENTLY AMENDED) The method of claim 19 wherein said tracking step further comprises:

tracking an amount of different types of processing ~~usage~~.

Claim 27: (CURRENTLY AMENDED) The method of claim 26 wherein said tracking step further comprises the step of ~~includes~~:

~~said one or more gateways each~~ executing code, in each of said one or more gateways, to increment a count maintained for a particular one of said different types of processing ~~usage~~ responsive to an occurrence of said particular one type of processing ~~usage~~.

Claim 28: (CURRENTLY AMENDED) The method of claim 26 wherein said different types of processing ~~usage~~ includes handling of different types of messages from said one or more network elements.

Claim 29: (CURRENTLY AMENDED) The method of claim 19 wherein said communicating step comprises the step of:

~~is responsive~~ responding to polling by said usage management system of said at least one gateway for said amount of processing performed ~~usage information by said usage management system~~.

Claim 30: (CURRENTLY AMENDED) The method of claim 19 further comprising the step of:

~~said usage management system~~ electronically communicating, by said usage management system, ~~received~~ said respective amount of processing performed ~~usage information~~ to a recipient.

Claim 31: (CURRENTLY AMENDED) A gateway responsible for managing one or more network elements, said gateway comprising:

means for ~~processing~~ handling messages received from one or more network elements to which said gateway is communicatively coupled; [[and]]

means for tracking [[the]] an amount of processing performed by ~~usage of~~ said gateway in ~~processing~~ handling said messages received from said one or more network elements; and

means for determining if said at least one gateway is at a pre-selected processing capacity based on said measured amount of processing.

Claim 32: (CURRENTLY AMENDED) The gateway of claim 31 wherein the ~~processing~~ handling means includes a processor.

Claim 33: (CURRENTLY AMENDED) The gateway of claim 32 wherein the ~~processing~~ handling means further includes software code executable by said processor.

Claim 34: (CURRENTLY AMENDED) The gateway of claim 31 wherein [[the]] said tracking means includes software code executable to increment a count to track said amount of processing performed ~~usage~~.

Claim 35: (PREVIOUSLY PRESENTED) The gateway of claim 34 wherein said software code includes code implemented within an Application Program Interface (API).

Claim 36: (CURRENTLY AMENDED) The gateway of claim 35 wherein said API includes functionality that can be invoked to maintain a count of one or more types of processing ~~usage~~.

Claim 37: (CURRENTLY AMENDED) The gateway of claim 36 wherein the tracking means includes software code that, upon occurrence of a type of processing ~~usage~~, invokes said functionality of said API to increment a count for said type of processing ~~usage~~.

Claim 38: (CURRENTLY AMENDED) The gateway of claim 37 wherein said software code invokes said functionality by passing a descriptor of said type of processing ~~usage~~ to said API, and wherein said API maintains a count for said descriptor.

Claim 39: (CANCELLED)

Claim 40: (CANCELLED)

Claim 41: (CURRENTLY AMENDED) The gateway of claim 31 wherein the tracking means includes software code executable to track an amount of different types of processing ~~usage~~.

Claim 42: (CURRENTLY AMENDED) The gateway of claim 41 wherein said software code increments a count maintained for a particular one of said different types of processing ~~usage~~ upon occurrence of said particular one type of processing ~~usage~~.

Claim 43: (CURRENTLY AMENDED) The gateway of claim 42 wherein said different types of processing ~~usage~~ includes handling of different types of messages from said one or more network elements.

Claim 44: (CURRENTLY AMENDED) The gateway of claim 31 further comprising communicative coupling to a usage management system, wherein said gateway is operable to communicate said amount of processing performed ~~usage~~ to said usage management system.

Claim 45: (CURRENTLY AMENDED) A system comprising:

a processor-based management system;

a plurality of distributed gateways communicatively coupled to said processor-based management system, wherein said plurality of distributed gateways are responsible for managing one or more network elements, and wherein at least one of said distributed gateways is operable to ~~maintain usage information detailing~~ measure [[the]] an amount of processing performed by ~~usage of~~ said at least one of said plurality of distributed gateways in managing said one or more network elements; and

a usage management system communicatively coupled to said at least one of said plurality of distributed gateways, wherein said at least one of said plurality of distributed gateways is operable to communicate said measured amount of processing performed ~~usage information~~ to said usage management system.

Claim 46: (CANCELLED)

Claim 47: (CURRENTLY AMENDED) The system of claim [[46]] 45 wherein said ~~gateway~~ processing includes handling of messages received [[form]] from said one or more network elements.

Claim 48: (ORIGINAL) The system of claim 47 wherein said at least one of said plurality of distributed gateways includes a SNMP gateway responsible for managing one or more SNMP network elements, and wherein said handling of messages includes handling of SNMP messages.

Claim 49: (CURRENTLY AMENDED) The system of claim 48 wherein said SNMP messages includes at least one message selected from the group consisting of: SNMP Trap messages, SNMP Get Messages, and SNMP Set messages.

Claim 50: (CURRENTLY AMENDED) The system of claim 45 wherein said at least one of said plurality of distributed gateways includes software code executable to track its respective amount of processing performed ~~usage~~.

Claim 51: (CURRENTLY AMENDED) The system of claim 45 wherein said at least one of said plurality of distributed gateways includes software code executable to track an amount of different types of processing ~~usage~~.

Claim 52: (CURRENTLY AMENDED) The system of claim 51 wherein said software code increments a count maintained for a particular one of said different types of processing ~~usage~~ upon occurrence of said particular one type of processing ~~usage~~.

Claim 53: (CURRENTLY AMENDED) The system of claim 52 wherein said different types of processing ~~usage~~ includes handling of different types of messages from said one or more network elements.

Claim 54: (CURRENTLY AMENDED) The system of claim 45 wherein said usage management system is operable to poll said at least one gateway for said amount of processing performed ~~usage information~~.

Claim 55: (ORIGINAL) The system of claim 45 wherein said usage management system is implemented on a common platform with said processor-based management system.

Claim 56: (CURRENTLY AMENDED) A method for providing to a customer at least one gateway for use in managing one or more network elements, wherein [[said]] the customer is charged a fee that is based at least in part on [[the]] an amount of processing performed by ~~usage of~~ said at least one gateway, said method comprising the steps of:

providing to [[said]] the customer at least one gateway for use in managing one or more network elements;

[[track]] tracking, in the at least one gateway, the amount of [[its]] processing performed by the at least one gateway ~~usage~~;

calculating the fee based on the amount of processing performed by the at least one gateway on behalf of the customer~~;~~

~~billing said customer based at least in part on the amount of usage of said at least one gateway~~.

Claim 57: (CANCELLED)

Claim 58: (CURRENTLY AMENDED) The method of claim [[57]] 56 wherein said ~~gateway~~ amount of processing performed includes handling of messages received from said one or more network elements.

Claim 59: (ORIGINAL) The method of claim 56 wherein said functionality is provided by software code executable within said at least one gateway.

Claim 60: (CURRENTLY AMENDED) The method of claim 56 wherein said at least one gateway further comprises:

functionality to track an amount of different types of processing ~~usage~~.

Claim 61: (CURRENTLY AMENDED) The method of claim 60 wherein said at least one gateway increments a count maintained for a particular one of said different types of processing ~~usage~~ upon occurrence of said particular one type of processing ~~usage~~ at said at least one gateway.

Claim 62: (CURRENTLY AMENDED) The method of claim 60 wherein said different types of processing ~~usage~~ includes handling of different types of messages from said one or more network elements.

Claim 63: (CURRENTLY AMENDED) The method of claim 56 further comprising the step of:

communicating said amount of processing ~~usage~~ from said at least one gateway to a usage management system to which said at least one gateway is communicatively coupled.

Claim 64: (ORIGINAL) The method of claim 63 wherein said communicating step is responsive to polling of said at least one gateway by said usage management system.

Claim 65: (ORIGINAL) The method of claim 63 wherein said usage management system is communicatively coupled to a plurality of gateways, further comprising the step of:

said usage management system compiling usage information received from said plurality of gateways.

Claim 66: (ORIGINAL) The method of claim 65 further comprising the step of:

said usage management system electronically communicating compiled usage information to a recipient.

Claim 67: (CURRENTLY AMENDED) The method of claim 63 further comprising:

said usage management system electronically communicating said amount of usage received from said at least one gateway to a recipient.

Claim 68: (CURRENTLY AMENDED) A system as in claim 1, wherein [[the]] said usage management system charges a user of said at least one gateway a fee based on said amount of processing performed ~~the communicated usage information~~.

Claim 69: (CURRENTLY AMENDED) A method as in claim 19, further comprising:

charging a user of a respective gateway of said one or more gateways a fee based on the ~~communicated~~ amount of processing performed by ~~usage of~~ the respective gateway.

Claim 70: (CURRENTLY AMENDED) A gateway as in claim 31, further comprising:

means for charging a user of said gateway a fee based on the tracked amount of processing performed by ~~usage of~~ the gateway.

Claim 71: (CURRENTLY AMENDED) A system as in claim 45, wherein the usage management system charges a user of said at least one of said plurality of distributed gateways a fee based on ~~the communicated~~ said measured amount of processing performed ~~usage information~~.